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Subb 17
A 2
18. The power toothbrush of claim 16, wherein said vibration isolation means is positioned between the brush shaft and the handle.

19. The power toothbrush of claim 16, wherein said vibration isolation means includes a vibration dampening material.

A 3 Subb 17
21. A power toothbrush comprising:
a handle;
a brush head including bristles, said brush head attached to said handle;
a vibratory motor for causing said bristles to vibrate, said vibratory motor positioned entirely in said brush head distal from said handle and oriented parallel to a longitudinal axis of said power toothbrush; and
a vibration isolation means for reducing the transfer of vibrations from said vibratory motor to said handle.

REMARKS

Please consider the following responses to the issues raised in the Office action.

Claim Amendments

Claims 1 and 10 are amended to more accurately describe the novel components of the claimed invention, including the brush shaft and the motor shaft.

Claims 2-9, 11, 12, 14, 15, and 17-19 are amended to provide appropriate subject verb agreement.

Claims 6, 8, and 9 are amended to change their dependencies to claim 1 and thus broaden their scope.

Claims 11-13 and 15 are amended to correct typographical errors and change their dependencies to claim 10 as intended.

Claim 14 is amended to change its dependency from claim 12 to claim 10 and thus broaden its scope.

Claim 16 is amended to more accurately describe the placement of the eccentric motor in the brush shaft and to correct a referential error suggesting the motor was in the brush head after previously described as being in the brush shaft, thereby creating an internal inconsistency.

Claim 21 is amended to more accurately describe the placement of the eccentric motor in the brush shaft.

Drawings

The drawings are rejected in the Office action for failing to comply with 37 C.F.R. § 1.84(p)(5) because the reference numeral “25” shown in Figure 3 is not found in the written description. Page 8 of the written description has been amended to indicate the appropriate description related to reference numeral 25. Applicants believe that such amendment satisfies the objection and request that such objection be withdrawn.

Double Patenting

The Office action identifies a potential objection pursuant to 37 C.F.R. § 1.75 to claims 13 and 14 should claims 7 and 8 be allowed. Claims 13 and 14 as originally filed contained typographical errors whereby they depended from claim 9 rather than independent claim 10 as intended. Claims 13 and 14 have been amended herein to depend from claim 10 as intended. Applicants believe that such amendments satisfy the objection and request that such objection be withdrawn.

Claim Rejections – 35 U.S.C. § 112

The Office action rejects claim 14 pursuant to 35 U.S.C. § 112 as being indefinite. Claim 10 has been amended to include a brush shaft as an element and claim 14 has been amended to depend from claim 10 rather than from claim 12. Applicants believe that such amendments satisfy the rejection and request that such rejection be withdrawn.

Claim Rejections – 35 U.S.C. § 102

The Office action asserts that claims 1-3, 5, 5, 10, 12, 15, and 20-22 are rejected as anticipated by Japanese patent 3222905 to Iguchi; that claims 1-7, 10-13, 15, and 19-22 are anticipated by U.S. Patent No. 5,511,270 to Eliachar et al.; and that claims 1-4, 7-11, 13-19, 21, and 22 are anticipated by U.S. Patent No. 5,987,681 to Hahn et al. Applicants initially note that claims 20 and 22 are canceled herein, therefore the rejection with respect to these claims is moot.

Claim 1 is directed to a power toothbrush comprising a motor shaft connected with a handle and received in a brush shaft. It is respectfully submitted that none of the cited references disclose a motor shaft connected with the handle and received in the brush shaft as provided in claim 1. For at least this reason, the invention as presented in claim 1, and in claims 2-9 depending therefrom, is believed to possess the requisite novelty when considered in light of the cited references.

Claim 10 is directed to a power toothbrush comprising a motor shaft connected with a handle and received within a brush shaft. It is respectfully submitted that none of the cited

references disclose a motor shaft connected with the handle and received in the brush shaft as provided in claim 10. For at least this reason, the invention as presented in claim 10, and in claims 11-15 depending therefrom, is considered to possess the requisite novelty when considered in light of the cited references.

Claim 16 is directed to a power toothbrush comprising an eccentric motor positioned entirely in a brush shaft and oriented parallel to a longitudinal axis of the toothbrush. It is respectfully submitted that none of the cited references disclose an eccentric motor positioned entirely in a brush shaft and oriented parallel to a longitudinal axis of the toothbrush as provided in claim 16. For at least this reason, the invention as presented in claim 16, and in claims 17-19 depending therefrom, is considered to possess the requisite novelty when considered in light of the cited references.

Claim 21 is directed to a power toothbrush comprising a vibratory motor positioned entirely in a brush head and oriented parallel to a longitudinal axis of the toothbrush. It is respectfully submitted that none of the cited references disclose a vibratory motor positioned entirely in a brush head and oriented parallel to a longitudinal axis of the toothbrush as provided in claim 21. For at least this reason, the invention as presented in claim 21 is considered to possess the requisite novelty when considered in light of the cited references.

The following discussion is provided in particular respect to claims 16-19 and 21. Hahn et al. discloses, among other things, an eccentric motor and a vibration isolation means positioned between the brush shaft and handle. Based, in part, on these disclosed structures, the Office action finds these claims anticipated. Claim 16, as amended herein, provides that the eccentric motor is positioned entirely in the brush shaft. The Office action states that the eccentric motor described in Hahn et al. is positioned in the brush shaft. The motor in Hahn et al. is actually at least partially positioned within and encompassed by the handle while the weight attached to the motor is positioned below the brush head connected by an extended drive shaft. In fact, part of the handle of Hahn et al. is actually formed by the structure that ultimately functions as the brush shaft. The amendment to claim 16 is proposed to clarify this distinction. Claim 21 is similarly amended herein to indicate that the vibratory motor is housed entirely in the brush head. It is believed that such amendments differentiate the present invention from the disclosure of Hahn et al.

Summary

In light of these remarks, Applicant believes the pending claims of the present application are patentable in view of the prior art. Allowance and issue of all pending claims is therefore requested.

Respectfully submitted this 23rd day of January 2003 by



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Agents for Applicant



APPENDIX A

Marked-up Version of Amendments

(Insertions are underlined and deletions are shown in ~~strike through~~.)

In the Written Description

Please amend the paragraph spanning page 8, line 27 to page 9, line 2 to include omitted reference numeral 25 shown in Figure 3 as follows:

In one embodiment, vibratory means 24 includes an eccentric motor which rotates an off center weight 25 attached thereto. One motor which may be used for creating the vibration is a Jinglong Co. model OTL-6CL or equivalent. The OTL-6CL model is generally a 1.3V DC motor. However, any motor suitable for creating vibration that has a small enough size and can be powered by a battery the size of an AA battery or the like could be used. Off-center weight motor 24 provides a magnitude of tip motion (approximately 0.02 inches in the x and y directions) for brushing purposes, in one example.

In the Claims

Please cancel claims 20 and 22. Please amend claims 1-19 and 21 as follows:

1. A power toothbrush comprising:
a handle;
a brush head including bristles, ~~said brush head connected with said handle;~~
a brush shaft connected to said brush head;
a motor shaft connected with said handle and received in said brush shaft;
a vibratory means for causing said bristles to vibrate; and
a vibration isolation means for reducing vibrations from said vibratory means to said handle.
2. The power toothbrush of claim 1, wherein said vibration isolation means ~~are~~ is positioned between said vibratory means and said handle.
3. The power toothbrush of claim 1, wherein said vibration isolation means ~~include~~ includes a vibration dampening material positioned between said brush head and said handle to at least partially absorb vibrations caused by said vibratory means.

4. The power toothbrush of claim 1, wherein said vibratory means ~~include~~ includes an eccentric motor.
5. The power toothbrush of claim 1, wherein said vibratory means ~~are~~ is positioned in said brush head.
6. The power toothbrush of claim ~~5~~ 1, wherein said vibration isolation means ~~are~~ is positioned between said brush head and said handle.
7. The power toothbrush of claim 1, ~~further comprising: a~~ wherein said brush shaft ~~connected to and~~ are integrally formed.
8. The power toothbrush of claim ~~7~~ 1, wherein said vibratory means ~~are~~ is positioned in said brush shaft.
9. The power toothbrush of claim ~~8~~ 1, wherein said vibration isolation means ~~are~~ is positioned between said brush shaft and said handle.
10. A power toothbrush comprising:
a handle;
a brush shaft;
a brush head including bristles, said brush head adapted to be connected with said ~~handle~~ brush shaft;
a motor shaft connected with said handle and received in said brush shaft;
a vibratory means for causing said brush head and said bristles to vibrate; and
a vibration isolation means positioned between said vibratory means and said handle for reducing the transfer of vibrations from said vibratory means to said handle.
11. The power toothbrush of claim ~~9~~ 10, wherein said vibratory means ~~include~~ includes an eccentric motor.
12. The power toothbrush of claim ~~9~~ 10, wherein said vibratory means ~~are~~ is positioned in said brush head.
13. The power toothbrush of claim ~~9~~ 10, wherein said brush head and said brush shaft are integrally formed and are adapted to be connected with said handle.
14. The power toothbrush of claim ~~12~~ 10, wherein said vibratory means ~~are~~ is positioned in said brush shaft.

15. The power toothbrush of claim ~~4~~ 10, wherein said vibration isolation means ~~include~~ includes a vibration dampening material.

16. A power toothbrush ~~including~~ comprising:
a handle;
a brush shaft;
a brush head with bristles; and
an eccentric motor for causing the bristles to vibrate, ~~said toothbrush comprising~~
wherein the eccentric motor is positioned entirely in said brush shaft distal from said handle
adjacent to and below said head oriented parallel to a longitudinal axis of the power
toothbrush; and
a vibration isolation means for reducing the transfer of vibrations from the brush head
shaft to the handle.

17. The power toothbrush of claim 16, wherein said vibration isolation means ~~are~~
is positioned between the brush head and the handle.

18. The power toothbrush of claim 16, wherein said vibration isolation means ~~are~~
is positioned between the brush shaft and the handle.

19. The power toothbrush of claim 16, wherein said vibration isolation means
~~include~~ includes a vibration dampening material.

21. A power toothbrush comprising:
a handle;
a brush head including bristles, said brush head attached to said handle;
a vibratory motor for causing said bristles to vibrate, said vibratory motor positioned
entirely in said brush head distal from said handle and oriented parallel to a longitudinal axis
of said power toothbrush; and
a vibration isolation means for reducing the transfer of vibrations from said vibratory
motor to said handle.